

In the Claims

Claims 1-18 (Canceled)

19. (Currently amended) An antibody produced against a recombinant binding to a Cryptosporidium antigen cryptopain antigen comprising depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, and binding to said recombinant or a native cryptopain antigen depicted by said amino acid sequences SEQ ID Nos.: 4-6.

20. (Currently amended) The antibody of Claim 19 binding to the ~~fragment of SEQ ID NO: 4, said fragment~~ identified by ~~[[an]]~~ the amino acid sequence SEQ ID NO: 5.

21. (Currently amended) The antibody of Claim 19 binding to the ~~fragment of SEQ ID NO: 4, said fragment~~ identified by ~~[[an]]~~ the amino acid sequence SEQ ID NO: 6.

22. (Previously presented) The antibody of Claim 19, wherein the antibody is monoclonal or polyclonal.

23. (Currently amended) The antibody of claim 19 detecting a presence of *Cryptosporidium* cryptopain antigen by formation of an anti-cryptopain antibody-cryptopain antigen complex.

24. (Currently amended) The antibody of claim ~~[[22]]~~ 23 wherein the antibody is polyclonal.

25. (Currently amended) The antibody of claim ~~[[22]]~~ 23 wherein the antibody is monoclonal.

Claims 26-39 (Canceled).

40. (Currently amended) ~~[[The]]~~ A polyclonal anti-cryptopain antibody of claim 19 suitable for treatment of *Cryptosporidium* infections wherein said antibody is administered to a person in need of such treatment, said antibody produced against a recombinant *Cryptosporidium* cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, said antibody binding to said cryptopain antigen,

wherein said antibody is administered in an amount effective to provide immunity or to inhibit existing *Cryptosporidium* infection.

41. (Previously presented) The antibody of claim 40 raised against an amino acid sequence depicted by SEQ ID NO: 4.

42. (Previously presented) The antibody of claim 41 raised against a cryptopain fragment depicted by SEQ ID NO: 5.

43. (Previously presented) The antibody of claim 41 raised against a cryptopain fragment depicted by SEQ ID NO: 6.

44. (Currently amended) ~~[[The]]~~ A polyclonal or monoclonal anti-Cryptosporidium antibody of claim 19 suitable for detecting Cryptosporidium infection in a biological or environmental sample wherein said antibody is contacted with a biological sample specimen obtained from a person or with an environmental sample suspected to be infected with Cryptosporidium, wherein said antibody is produced against a recombinant Cryptosporidium cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, and binding to said recombinant or a native cryptopain antigen depicted by said amino acid sequences SEQ ID Nos.: 4-6.

45. (Currently amended) The antibody of claim 44 which detects a formation of an anti-cryptopain antibody/cryptopain antigen complex in the biological or environmental sample.

46. (Currently amended) The antibody of claim 45 wherein the anti-cryptopain antibody/cryptopain antigen complex is detected with an enzyme-linked immunoassay or with a radioactive assay.

47. (Currently amended) The antibody of claim 45 wherein the formation of the anti-cryptopain antibody/cryptopain antigen complex is detected by solid phase method, with double antibody assay, sandwich double antibody assay or triple antibody assay or ELISA.

48. (Currently amended) The antibody of claim ~~[[44]]~~ 45 which detects a presence of the anti-cryptopain antibody/cryptopain antigen complex of *Cryptosporidium* in a tissue ~~[[,]]~~ or fluid biological sample ~~or in environment~~.

49. (Currently amended) The antibody of claim 48 [detected as] which detects a presence of the anti-cryptopain antibody/cryptopain antigen complex in a stool, urine, saliva, blood or serum sample specimen.